DOCUMENT RESUME

ED 348 614 CG 024 432

AUTHOR Galaz-Fontes, Jesus Francisco; And Others
TITLE Leadership May Provide the Means of Moving Up in Adult Moral Developmental Stages.
PUB DATE Apr 92
NOTE 17p.; Paper presented at the Annual Meeting of the Eastern Psychological Association (63rd, Boston, MA, April 3-5, 1992).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Adults; Cultural Influences; Educationally Disadvantaged; Foreign Countries; High Schools; High School Students; Individual Development; *Moral Development; Socioeconomic Influences
IDENTIFIERS Mexico

ABSTRACT

Although Kohlberg and others have proposed that various social psychological and cultural factors may influence a person's level of moral reasoning, most work in this area has been conducted among relatively well educated persons in so called advanced societies. These two studies investigated stages of reasoning about moral dilemmas among nonliterate and unschooled adults in a rapidly changing society in a Mexican border city. Uneducated adults (N=34) participated in the first study. Dilemmas in which two or more principles were at stake were presented. The study located people functioning at stage 3/4 (the stage of formal operations). These persons differed from others in terms of exposure to different cultural and organizational contexts and responsibility for others' welfare as leaders. Based upon the hypotheses derived from this first study the second used a 2 by 2 by 2 factorial design to examine moral reasoning among high and low socioeconomic status Mexican high school students (N=30), with high or low contact with another culture, who were or were not identified as leaders. As predicted, results suggested that higher socioeconomic status and leadership are associated with higher stages of moral reasoning. For leaders, crosscultural contact facilitated reasoning at a higher stage. For nonleaders, it did not. Crosscultural contact by itself had no effect. (Author/ABL)

**********
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
**********

ED348614

# Leadership May Provide the Means of Moving Up in Adult Moral Developmental Stages

Jesús Françisco Galaz-Fontes
Isidra Guadalupe Hernández-Morelos
Irene Sierra Morales
Blanca Estela Miranda-Romero

Universidad Autónoma de Baja California

Michael L. Commons
Harvard Medical School

Stanley J. Morse
Bridgewater State Hospital

CG024432

Copies may be obtained from:

Michael L. Commons, Ph.D.
Lecturer and Research Associate
Department of Psychiatry
Harvard Medical School
Massachusetts Mental Health Center
74 Fenwood Road
Boston, MA 02115-6196

(617) 497-5270

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Michael L. Commons

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC).

BEST COPY AVAILABLE

## ABSTRACT

Although Kohlberg and others have proposed that various social psychological and cultural factors may influence a person's level of moral reasoning, most work in this area has been conducted among relatively well educated persons in so called advanced societies. The present paper reports preliminary results of two studies conducted in a Mexican border city. The first was designed to determine (a) if it is possible for uneducated, illiterate adults to reason about moral issues at a high stage (by using an empirical, formal operational approach); and (b) if so, what social factors might facilitate their doing so. This study did locate persons functioning at stage 3/4 (the stage of formal operations). These persons differed from others in terms of (a) exposure to different cultural and organizational contexts; and (b) responsibility for others' welfare as "leaders." Based upon hypotheses derived from this first study, the second used a 2 by 2 by 2 factorial design to examine moral reasoning among (a) high and low socioeconomic status high school students; (b) with high or low contact with another culture (the U.S.); who (c) were or were not identified as leaders. As predicted, results suggest that higher socioeconomic status and leadership are associated with higher stages of moral reasoning. For leaders, crosscultural contact facilitated reasoning at a higher stage. For nonleaders, it did not. Crosscultural contact by itself had no effect.

## INTRODUCTION

Kohlberg's (1984) approach to "moral reasoning" is an extension into the moral realm of Piaget's (1972) more general theory of cognitive development. The basic premise is that development progresses through invariant, culturally universal stages. As Kohlberg suggests, higher stages of reasoning require the proficiency to think abstractly (i.e., to deal with concepts rather than just concrete issues) and empirically (i.e., in terms of logically derived, empirically based propositions).

Crosscultural research using nonliterate samples has not found reasoning at higher stages (Dasen, 1977, Dasen, Ngini, & Lavalle, 1979; Snarey, 1985; Ure & Colinvaux, 1985). Such research does however confirm the universality of the sequencing of stages suggested by Piaget's theory. The little cross cultural research that has been undertaken to investigate how nonliterate people reason in the moral domain (Edwards, 1981; Harkness, 1980; Harkness, Edwards, & Super, 1981; Harkness & Super, 1980; Kohlberg, 1971; Lee, 1973; LeVine, 1980) has produced similar results. These studies confirm the universality of the *sequencing* of stages required by Kohlberg's theory (1984) but not the universality of higher stage *reasoning* itself.

There may be a methodological reason why researchers have not found higher developmental stages of reasoning with samples of respondents drawn from nonwestern, nonindustrialized, and nonschooled cultures. Perhaps in their attempt to employ large, representative samples they have *not* examined persons who, while they may be uneducated and even illiterate, are faced with task demands requiring higher stage reasoning: task demands frequently found in more complex societies. This is an important issue because transition from one stage of reasoning to the next has been shown to depend upon situational reinforcement of higher stage reasoning (Commons, Grotzer & Davidson, 1991). One cannot reinforce solutions to problems that have not presented themselves. Kohlberg (1987), in this regard, suggests that having to adopt multiple roles and/or multiple perspectives is a prerequisite for higher stage reasoning.

Under what conditions, then, might persons who are non literate and without formal education adopt multiple roles or multiple perspectives? By definition, leaders (i.e., persons with power and influence over others, who must coordinate activities of others) face such task demands. To be successful, they must be able to examine an activity both from the different perspectives of those over whom they exert influence and from the perspective of external organizations and individuals with whom they must deal. Another factors which should facilitate multiple perspective taking is meaningful contact with persons whose perspectives may be different from one's own. Extensive crosscultural contact is one means of exposure to such "foreign" perspectives.

The present exploratory research uses a two-step approach to investigate these issues. It first investigates stages of reasoning about moral dilemmas among nonliterate and unschooled adults in a rapidly changing society. In such a society some persons would be expected to have a wider range of role experiences than others. Can we, in this context, find persons who reason at a higher stage than their compatriots? What experiences might account for their proficiency to reason more abstractly and more empirically than others? In the second study we specifically investigate three social structural variables: (a) leadership, (b) crosscultural contact, and (c) socioeconomic status. Numerous studies stress the

importance of socioeconomic status (e.g., Devos, 1983) in facilitating higher stage reasoning.

## STAGES OF REASONING

In referring to "higher stage reasoning about moral issues" we are applying concepts derived from the study of cognitive development in general to reasoning about moral and political issues. Piaget (Inhelder & Piaget, 1958) saw "formal operational thinking" as the highest stage of cognitive development. He defined formal operational thinking as the capacity to consider every logical possibility in a scientific problem and to reflect upon one's own thinking about the problem. In generalizing this concept to other areas of thought, Commons and Richards (1984) suggest that formal operational thinking is the detection of relationships among variables, whatever the domain.

Commons and Grotzer (1990) and Kohlberg (1984) have argued that Piagetian logical reasoning is imbedded within corresponding responses to moral dilemmas. Therefore, reasoning in a particular manner in the *moral domain* requires the proficiency to reason in this way *in general*. In this paper we are specifically concerned with reasoning at what Commons and Grotzer (1990) and Kohlberg (1984) refer to as stages 2/3 (Concrete), 3 (Abstract), and 3/4 (Formal).

Stage 2/3 corresponds to Piaget's stage of concrete operations. In this stage no generalizations are made. A person responds to the particulars of the situation at hand, without reference to generalities embodied in variables or stereotypes. A particular person may, for example, be considered good if the person's actions yield good outcomes for the target of the person's actions. The assumption is made that doing such good will lead others to do likewise.

Stage 3 corresponds to Piaget's stage of abstract operations. In this stage the person makes reference to general propositions but each proposition is considered in isolation from other propositions or concepts. A person might, for example, be considered good if he or she meets a set of abstract criteria. A good person does not, for instance, harm others but instead generates harmony with others. Persons at stage 3 do not however reason logically about the abstract concepts involved.

Stage 3/4, finally, corresponds to Piaget's last stage: *formal operations*. People at this stage think logically and empirically about abstractions such as variables and propositions. They consider these variables and propositions simultaneously, in terms of interrelationships based upon such organizing principles as logic or linear causal chains. An attempt is also made to bring empirical evidence to bear upon the propositions involved. Chains of quantified logical propositions are used, yielding logically derived solutions to moral dilemmas.

We will not consider Stage 4 in this paper. This stage corresponds to what Piaget refers to as systematic operations. It requires a societal orientation, with society consisting of systems of rights, obligations, and laws.

## STUDY I: NONLITERATE MEXICAN ADULTS

### Subjects

Thirty-four uneducated adults ranging from 23 and 70 years of age participated in the study. Thirty-one had no education and three had 1 to 3 years of elementary school. All were residents of urban sections of

Mexicali, Baja California, México. They were immigrants from the center and south of the country, in which the great majority of families consisted of more than six members. Their family members also lacked schooling. The subjects performed a wide range of activities (homemakers, domestics, laborers, small vendors, etc). Five were single. The rest (29) were involved in some kind of union with another person from cohabitation to marriage.

Seven of the subjects (four women and three men), had some type of influence or leadership in their groups of immediate reference (family, community, or work place). These people were called upon to advise in personal or work related problems. Two of the people were involved in some kind of political organization or party. The rest, because of the long duration of their employment and because of the quality of their work, had influence among the rest of their coworkers. Also some were recognized authorities in their family and in their group of friends. The leaders had an average age of 49 years, the rest of the subjects an average age of 52.

Thirty-four students in a developmental psychology course at a university in Mexicali, Mexico were trained to conduct interviews exploring responses to standard Kohlberg "moral dilemmas." Each student was asked to interview a person whom he or she knew fairly well, who had not attended school and did not know how to read or write, and who had lived in the city for at least ten years. This approach was used to promote cooperation with the investigation since respondents in Latin America tend to be very reticent in talking with strangers. We felt that establishing good rapport would increase the likelihood of finding higher stage respondents. Dilemmas III and III' were presented to each respondent. Each dilemma presents a situation in which two or more principles are at stake. Dilemma III is the Heinz Dilemma, although the name "Juan" (John) was substituted for Heinz. After unsuccessfully trying all legal means of obtaining a drug that may save his wife's life, John/Juan/Heinz must decide whether or not to steal the drug, thereby clearly violating the law. In Dilemma III' a boy saves his money to buy a bicycle or attend summer camp. Friends of his father show up. Father wants to go fishing with them but does not have the money. Should the boy give his father the money?

Students taped and transcribed their interviews in Spanish. Without knowledge of the respondent's background, the first author scored each interview using the Standard Issue Scoring System developed by Colby and Kohlberg (1987). Randomly selected interviews were independently scored by a bilingual researcher to assess reliability. Reliability was above 90 percent.

**Results**

The mean age of the thirty-four respondents (12 males and 22 females) interviewed so far is 49.6 (S.D. of 14.7). The youngest respondent was 23; the oldest was 70. All respondents were unschooled and could not read. Most respondents were from large families (a mean of 5.4 siblings; S.D. of 2.4), in which neither the father nor mother had attended school nor knew how to read or write. Female respondents were almost all housekeepers. Male respondents almost all worked in unskilled positions.

The distribution of stage of moral reasoning in the overall sample is shown in Table 1 (column 1). Two respondents (5.9%) were scored at stage 1/2 (preoperational actions), 2 (5.9%) at stage 2 (primary operations), 15 (44.1%) at stage 2/3 (concrete operations),

12 (35.3%) at stage 3 (abstract operations) and, finally, 3 (8.8%) at stage 3/4 (formal operations). See Tables 1 and 2.

The sample is divided into leaders and nonleaders, the stages of reasoning exhibited begin to show a pattern (see Table 3). Table 4 shows equivalent results, using the Weighted Average Moral Judgement Score (*WAS*). The *WAS* was computed for each subject (Colby & Kohlberg, 1987). Dividing this score by 100 indicates the subject's stage of moral reasoning. Both tables show that nonleaders tended to reason more often at the concrete operational stage, or at most the abstract stage. Leaders, on the other hand, reasoned mainly at the abstract or formal operational levels. See Tables 3 and 4.

**Thinking at stage 3/4**

It will be useful to provide some indication of the nature of the higher stage thinking (stage 3/4), the formal operational stage of the subjects labelled as leaders. "Q" indicates question. "R" indicates answer. The first respondent stated:

Q: Should people do whatever they can to obey the law?
R: Necessarily, necessarily.
Q: Why?
Q: Because all of us who want to live in an orderly way, have to obey the law.

This is a stage 3/4 response because it employs a logical argument involving a universal ("all of us") and two propositions (wanting to live in an orderly way and obeying the law) connected by necessity (must). The action of obeying is applied to the abstract collection of propositions that constitute "the law." A logical relationship is asserted between obeying the law and living in an orderly way. As a result of obeying the law, everyone will "live in an orderly way." We interpret orderly as meaning logically orderly rather than harmoniously as would be the case at the abstract stage. This same respondent stated:

> R: When you have situations such as happened to John, the person who was going against the law was the pharmacist. Every man has to do something to help others. But this man discovered something with the sole purpose of being the only one [to] benefit from it. Because he told John that he had discovered it and that he was going to make money from it, he was thinking solely of himself. And there he was being unjust and even going against the law. So in these cases the person who should be punished is the pharmacist, because of acting unjustly and providing no service to anyone. What he did with the discovery was only in his own behalf, for his own enrichment.

Formal operational thinking is shown here by use of the universal proposition that "every man" (and a pharmacist in particular) "should provide service to" others, and thus consider their welfare and needs. The assertion is made that doing so will promote a proper way of living. Here is a "beginning conception of the extended social good" (Colby & Kohlberg, 1987, p. 33). Not behaving in this way (i.e., not providing services to others) must be considered as operating outside the law because such action does not help "anyone" to "live in an orderly way."

The second respondent gave these answers:

Q: Should people do whatever they can to

obey the law?
R: Yes.
Q: Why?
R: Because we must respect the law by all means. Even though sometimes we know that it is against us, we must obey the law.
Q: How does this apply to what John should do?
R: Well, the law has to be followed anyway. He stole and it is his obligation to pay the punishment that the law is going to extract.

Formal reasoning is evident here because the respondent identifies an abstract "duty to obey the law." The law must always be obeyed, even if "we know that it is against us." Note that by stating that one's obligation is not influenced by whether or not the law benefits the person involved, the respondent shows that she has considered all possible values of the variable of who benefits from breaking the law. She has rejected this variable, saying that John should "be willing to accept the negative sanctions that exist for violation of the standards of society" (Colby & Kohlberg, 1987, p. 166).

Q: Thinking in terms of society, should people who break the law be punished?
R: Yes.
Q: Why?
R: Because if those who commit a crime are not punished, the law wouldn't be useful.

Again the argument is logical. There is implied empirical evidence for the asserted causal relationship between two abstract stage propositions: the letting people break the law and making the law useless. The respondent uses universals, "Anyone, "the law, in a universal sense." Anyone who breaks the law [an abstract stage statement], even if for a good reason, should expect punishment. Otherwise, the law, in a universal sense, would be useless.

Here are excerpts from the interview with a third respondent:

Q: Should people do everything they can to obey the law?
R: Well, yes. Yes, they should. But as I told you... many times you see yourself obligated to obey the law and the government proceeds as it should, with jail or whatever should be done according to the damage done. The government has the obligation to investigate why someone broke the law and to make sure that the person really had... couldn't do anything else; that he had to... steal. Practically the government should set him free, because they themselves are convinced that he stole out of necessity, and that he is not going to do it again. He's not going to do it for pleasure.

Formal operational reasoning follows from a consideration of the government as an instrument that punishes, "with jail or whatever should be done according to the damage" anyone (a universal quantifier) who commits a crime deserves. Once again, there is an implicit set of rules that we might call law. These should apply, with certain qualifications, to everyone. Here "good intentions" begin "to be formalized as a legitimate, semilegal consideration in assigning punishment" (Colby & Kohlberg, 1987, p. 124).

**Professional and social demands**

Why do these two men and one woman reason differently about these moral dilemmas than their compatriots, who also

have had no schooling and are illiterate? The first respondent discussed is a 55 year old man who has lived in several very different cultural settings: a small rural town (15 years), Mexico city (6 years), and Chicago (7 months), as well as Mexicali.

This person also has an extensive work history: construction and railroad worker, farm worker, food vendor, and cooler repairman. He has also supervised a crew of construction workers and has participated in organizing people to obtain government benefits.

The second respondent is a 53 year old woman. Aside from a brief period in which she made homemade candies for sale, she has no work experience outside the home. From a very early age she has devoted herself to activities within the home. She shared part of the responsibility for raising her younger siblings. Being very concerned about the welfare of other members of the family, and having participated in the resolution of diverse conflict situations, she has gained a high status in family circles. She is frequently asked for advise. Her opinions are well respected.

The last respondent is a 29 year old man who has apparently assumed no leadership role whatever. This man has nevertheless lived in three different cultural contexts: Michoacan and Mexicali in Mexico and as an illegal worker in the United States.

**Conclusions**

In this initial, exploratory study we found several uneducated, nonliterate subjects who scored at moral stage 3/4. This disproves the assertion that formal education is necessary for formal operational reasoning. While formal education is normally associated with higher stages of moral reasoning, situational demands and experiences may also facilitate such reasoning. Results of the present study suggest that playing a leadership role (whether inside or outside the family circle) may place the individual in a position where he or she must successfully solve tasks which have demands similar to those Kohlberg considers necessary to progress to a higher stage of moral reasoning.

## STUDY 2: MEXICAN ADOLESCENTS

The second study was conducted in Mexicali in Baja California and also in Calexico, California. This is an ideal research site in terms of the possibility of cross-cultural contact because these two towns straddle the border between the U.S. and Mexico. The setting thus constitutes a "natural laboratory" where we can independently study several factors that may influence stage of moral reasoning, only one of which is stage of cross-cultural contact.

**Subjects**

Subjects in this study are Mexican high school students from Mexicali attending the public and private high schools in Mexicali and the public high school in Calexico. No matter their socioeconomic status, Mexicans with relatives in the U.S. often attend school in Calexico. Mexican students from higher socioeconomic backgrounds who attend school in Mexico normally attend the private schools in Mexicali, whereas students from lower socioeconomic backgrounds attend public schools. Teachers and principles in all three schools were interviewed to identify "leaders" and "nonleaders" and to identify students of high and low socioeconomic status. Within a particular leadership/socioeconomic status group, students attending school in the U.S. constitute the high crosscultural contact

group while students attending school in Mexico constitute the low crosscultural contact group. Table 5 shows the number of subjects in this sample who are of high versus low SES, leaders versus nonleaders, and high verus low crosscultural contact. See Table 5.

Subjects in this study completed a questionnaire asking for biographical information. They were also interviewed using Kohlberg's Moral Judgment Interview, Form A (Colby & Kohlberg, 1987). Interviews took place in the school library, in a classroom, or in the subjects's home.

**Results**

To more systematically explore the notion that organizationally imposed task demands may facilitate higher stage moral reasoning, the second study employed a 2 (high or low socio-economic status) x 2 (high or low leadership) x 2 (high crosscultural contact or low cross-cultural contact) factorial design. The data reported here are based upon interviews with 30 subjects. Table 1 shows the distribution of stages of moral reasoning in this adolescent sample.

Table 6 shows how many adolescent leaders versus nonleaders reasoned at each of the stages. Table 7 shows mean WAS scores for each condition. Tables 6 and 7 taken together indicate that socioeconomic status and leadership status may affect reasoning. An analysis of variance computed on these data (and presented in Table 8) tests this supposition. See Tables 6, 7 and 8.

This analysis confirmed that socioeconomic status had a significant impact upon stage of moral reasoning. High SES respondents scored higher on WAS than did low SES respondents: 281 vs. 240, $F(1,28) = 27.37$, $p < 001$. There was also a tendency for leaders to have higher WAS scores than nonleaders, 269 vs. 250, $F(1,28) = 3.95$, $p < .06$. The main effect for crosscultural contact was not statistically significant: $F(1,28) = 1.84$, ns.

The two-way interaction between crosscultural contact and leadership was the only statistically significant interaction effect: $F(1, 28) = 5.08$, $p < .025$. Leaders with high crosscultural contact had higher WAS scores than leaders with low crosscultural contact: 294.2 vs. 252.5. For nonleaders the difference was not significant: 244.5 with high contact and 253.0 with low contact.

**Joint analyses of adult and adolescent samples**

Two multiple regression analyses, one predicting stage scores and one predicted weighted average scores, were carried out. They yielded the following three significant relations: For leadership, $R^2 = .1867$ $p < .0001$) for stage and $R^2 = .0997$, $p < .0041$ for WAS. For age $R^2 = .2654$, $p < .008$ for stage and $R^2 = .1864$, $p < .007$ for WAS. For socioeconomic level $R^2 = .3552$, $p < .005$) for stage and $R^2 = .3054$ $p < .001$) for WAS.

**Conclusions**

Initial results from this study suggest, as do the results of the first study, that being in a leadership position is associated with higher stage reasoning about moral issues. Contrary to expectations, crosscultural contact by itself does not influence moral reasoning. High contact leaders do however have a significantly higher mean WAS score than do low contact leaders, suggesting that leadership combined with high crosscultural contact facilitates higher stage reasoning about moral dilemmas. Replicating findings

of other studies, we also found that higher socioeconomic status is associated with higher stage moral reasoning.

## SUMMARY

We started by observing that crosscultural studies of stages of moral reasoning (similar to studies of stages of general cognitive development) find evidence to support an invariant sequence of movement from lower (less complex, more concrete) to higher (more complex, more abstract) stages. Functioning at higher stages is usually found only among educated person in western societies. We suggested that crosscultural researchers may however not have looked in the "right" places because they did not target for investigations those person most likely to show higher stage reasoning. The literature clearly suggests that having to perform tasks that place demands upon the person to adopt (or at least understand) differential perspectives and/or to perform different roles should facilitate higher stage reasoning about moral (as about other) issues. The first study deliberately used as respondents uneducated, illiterate adults from Mexicali, Mexico. In this study we found three persons (9.5 percent of the sample) reasoning about moral issues at the 3/4 stage, the stage of formal operations, demonstrating the existence of such thinking in non-literates. These persons seemed to differ from their compatriots in playing leadership roles in the community or in the family. Two of the three also had lived in a variety of cultural/situational contexts.

The second study directly investigated factors that might facilitate reasoning at a higher stage about moral issues: (a) socioeconomic status, (b) leadership, and (c) level of crosscultural contact. In this study, which is still under way, high school students from Mexicali were used as subjects. As predicted, both higher socioeconomic status and leadership are positively related to higher stage reasoning. Contrary to predictions, crosscultural contact was not related to such reasoning, although higher stage reasoning was found among leaders *with* high crosscultural contact compared with leaders without such contact.

These studies are obviously preliminary. Results are open to different interpretation. Direction of causality may sometimes be problematic. Does leadership, for example, facilitate reasoning at a higher stage or does reasoning in this way facilitate the attainment of leadership positions? There are also methodological difficulties. Is whether or not someone from across the border in Mexico attends school in the U.S. the best measure of level of crosscultural contact? Are the variables investigated independent? Is a Mexican with a given socioeconomic background who attends school in the U.S., for example, of the same background as one who attends school in the U.S. How might other perhaps associated factors such as "cosmopolitanism" affect the development of moral reasoning?

These two studies do nevertheless provide a start. They clearly suggest that it is worthwhile to search for social structural environmental and social psychological factors that may facilitate reasoning at a higher stage about moral and political issues. These studies may also suggest the reverse approach. What social structural and social psychological factors may inhibit or even reverse reasoning at a higher stage about such issues?

## REFERENCES

Barra Almagia, E. (1987). El desarrollo

moral: Una Introducción a la teoría de Kohlberg. Revista Latinoamericana de psicología. 19, 7-18.

Boyes, M. C., & Walker, L.J. (1988). Implications of cultural diversity for the universality claims of Kohlberg's theory of moral reasoning. Journal of Human of Developmental, 31, 44-59.

Colby, A. & Kohlberg, L. (1987). The measurement of moral judgement: Vol. 2. Standard issues scoring manual. Cambridge: Cambridge University Press.

Commons, M. L., & Grotzer, T. A. (1990). The relationship between Piagetian and Kohlbergian stage: An examination of the "necessary but not sufficient relationship." In M. L. Commons, C. Armon, L. Kohlberg, F. A. Richards, T. A. Grotzer, & J. D. Sinnott (Eds.), Beyond formal operations: Vol. 3, Models and methods in the study of adolescent and adult thought. New York: Praeger.

Commons, M. L., Grotzer, T. A., & Davidson, M. N. (1990). The necessity of reinforcing problem solutions for transition to formal operations: An examination of Piaget's equilibration theory of stage change.

Dasen, P.R. (Ed.) (1977). Piagetian psychology: Cross-cultural contributions. New York: Gardner Press.

Dasen, P. R., Ngini, L., & Lavallee, M. (1979). Cross-cultural training studies of concrete operations. In L. H. Eckensberger, W. J. Lonner, & Y. H. Poortinga (Eds.), Cross-cultural Contributions to Psychology. Amsterdam: Swets and Zeitlinger.

DeVos, E. (1983). Socio-economic influences on moral reasoning: A structural-developmental perspective. Unpublished doctoral dissertation, Harvard Graduate School of Education.

Galaz-Fontes, J. F. (1991). Introducción a la teoría del desarrollo moral de Lawrence Kohlberg. Revista Mexicana de Psicología.

Galaz-Fontes, J. F., Commons, M. L. (1989). Desarrollo Moral y Educación. Travesia, Num. 15, 21-25

Galaz-Fontes, J.F., Pacheco Sánchez, M.E., y Commons, M.L. (1990, enero-febrero). La experiencia universitaria y el desarrollo moral. Travesía, Num. 18, 5-8.

Goodman, M. L. (1967/1971). El individuo y la cultura. México: Pax.

Edwards, C.P. (1981). The comparative study of the development of moral judgement and reasoning. In R.H. Munroe, R.L. Munroe & B. B. Whiting (Eds.), Handbook of cross-cultural human development (pp. 501-528). New York: Garland Press.

Edwards, C. P. (1986). Cross-cultural Research on Kohlberg's stages: The basis for consensus. In S. Modgil (Eds.), Lawrence Kohlberg: Consensus and controversy. (pp. 419-430). London: Falmer Press.

Harkness, S. (1980). The cultural context of child development. In C. M. Super, & S. Harkness, (Eds.). New directions for child development: Vol. 8. Anthropological perspectives on child development (pp. 7-13). San Francisco: Jossey-Bass.

Harkness, S., Edwards. C.P., & Super, C.M. (1981). Social roles and moral reasoning: A case study in a rural African community. Developmental Psychology, 17(5), 595-603.

Harkness, S., Super, C.M. (1980). Child development theory in anthropological perspective. In C.M. Super, & S. Harkness, (Eds.). New directions for child development: Vol. 8. Anthropological perspectives on child

development (pp. 1-5). San Francisco: Jossey-Bass.

Inhelder, B., & Piaget, J. (1958). The growth of logical thinking from childhood to adolescence: an essay on the development of formal operational structures. (A. Parsons & S. Seagrim, trans.). New York: Basic Books (originally published, 1955).

Kohlberg, L. (1975). Desarrollo moral. En D. L. Sills (Comp) En Enciclopedia Internacional de las Ciencias sociales. (pp. 222-232) España: Aguilar.

Kohlberg, L. (1984). Essays on moral development: Vol. 2. The psychology of moral development: The nature and validity of moral stages. San Francisco: Harper & Row.

Laurendeau-Bendavid, M. (1977). Culture, schooling and cognitive development: A comparative study of children in French Canada and Rwanda. In P. Dasen (Ed.), Piagetian psychology: Cross-cultural contributions (pp. 123-168). New York: John Wiley & Sons.

Lee, B. (1973). A cognitive developmental approach to filiality development. Unpublished Masters Thesis. Committee on Human Development, University of Chicago.

LeVine, R. A. (1980). Anthropology and child development. In C. M. Super, & S. Harkness, (Eds.). New directions for child development: Vol. 8. Anthropological perspectives on child development (pp. 71-86). San Francisco: Jossey-Bass.

Luria, A. R. (1974/1980). Los procesos cognitivos. Análisis socio-historico. Barcelona: Fontanella.

Piaget, J. (1972). Intellectual evolution from adolescence to adulthood. Human Development, 91, 133-141.

Pratt, M. W., Golding, G., Hunter, W. J. (1983). Aging as ripening: Character and consistency of moral judgment in young, mature, and older adults. Human Development, 26: 277-288.

Snarey, J. R. (1985). Cross-cultural universality of social-moral development: A critical review of Kohlbergian research. Psychological Bulletin, 97(2), 202-232.

Tietjen, A. M. & Walker, L. J. (1985). Moral Reasoning and leadership among men in a papua new Guinea society. Developmental Psychology, 2(6) 982-992.

Ure, M. C. D., & Colinvaux, D. (1985). New results on the reasoning of unschooled adults. The Quarterly Newsletter of the Laboratory of Comparative Human Cognition, 7(1), 27-29.

Walker, L. J. (1986). Experiential and cognitive sources of moral development in adulthood. Human Development, 29(2), 113-124.

Table 1. Frequency of adolescent and adult noneducated and educated respondents from both studies by stage

| | | Study 1 Noneducated Adults | | Study 2 Educated Adolescents | |
|---|---|---|---|---|---|
| Stage | | N | Percentage | N | Percentage |
| 1/2 | (Preoperations) | 2 | 5.9 | 0 | 0 |
| 2 | (Primary Operations) | 2 | 5.9 | 4 | 13.3 |
| 2/3 | (Concrete Operations) | 15 | 44.1 | 18 | 60.0 |
| 3 | (Abstract Operations) | 12 | 35.3 | 7 | 23.3 |
| 3/4 | (Formal Operations) | 3 | 8.8 | 1 | 3.3 |
| | | 34 | 100.0 | 30 | 100.0 |

Table 2. Sex and role of the participants in both studies

| | Role | |
|---|---|---|
| Sex | Leaders | Non-leaders |
| Female | 10 | 27 |
| Male | 10 | 17 |
| Total | 20 | 44 |

Table 3. Frequency of adult leaders and nonleaders at each stage

| Stage | | N<br>Proportion<br>Leaders | Nonleaders | Total |
|---|---|---|---|---|
| 1/2 | Sentential | 0 | 2<br>.074 | 2<br>.059 |
| 1 | Preoperations | 0 | 0 | 0 |
| 2 | Primary | 0<br>0 | 2<br>.074 | 2<br>.059 |
| 2/3 | Concrete | 1<br>.143 | 14<br>.519 | 15<br>.441 |
| 3 | Abstract | 3<br>.429 | 9<br>.333 | 12<br>.353 |
| 3/4 | Formal | 3<br>.429 | 0<br>0 | 3<br>.882 |
| TOTAL | | 7<br>1.0 | 27<br>1.0 | 34<br>1.0 |

Table 4. Weighted average stage for adult leaders and nonleaders for noneducated group

| | Leaders | Non-leaders | Group total |
|---|---|---|---|
| N | 7 | 27 | 34 |
| WAS<br>SD | 314.429<br>39.178 | 262.963<br>38.396 | 273.6<br>43.437 |
| Stage<br>SD | 3.143<br>.378 | 2.556<br>.424 | 2.70<br>.475 |

Table 5. Number of adolescent respondents, by leadership and crosscultural contact

| | *Low* | | *High* | |
|---|---|---|---|---|
| | Leadership | | Crosscultural contact | |
| | Low | High | Low | High |
| Leader | 6 | | 2 | 2 |
| Nonleader | 6 | | 5 | 3 |
| | | | | 3 |

Table 6. Frequency of adolescent leaders and nonleaders at each stage

| | | N<br>Proportion | | |
|---|---|---|---|---|
| Stage | | Leaders | Non-leaders | Total |
| 1/2 | Sentential | 0 | 0 | 0 |
| 1 | Preoperations | 0 | 0 | 0 |
| 2 | Primary | 0<br>0 | 2<br>.12 | 4<br>.13 |
| 2/3 | Concrete | 7<br>.54 | 11<br>.65 | 18<br>.60 |
| 3 | Abstract | 4<br>.31 | 3<br>.18 | 7<br>.23 |
| 3/4 | Formal | 1<br>.08 | 0<br>0 | 1<br>.03 |
| TOTAL | | 13<br>1.0 | 17<br>1.0 | 30<br>1.0 |

Table 7. Mean WAS score for adolescents by leadership, SES and Crosscultural contact

| SES | Low | | High | |
|---|---|---|---|---|
| Leadership | Cross-Cultural Contact | | | |
| | Low | High | Low | High |
| Leader | 239 | 272 | 293 | 309 |
| Nonleader | 238 | 221 | 268 | 268 |

Table 8. Analysis of variance of WAS scores

| Source | df | SS | MSS | F | p |
|---|---|---|---|---|---|
| Between Subjects | 28 | 2666 | | | |
| L (Leader) | 1 | 1659 | 1659 | 3.95 | .0600 |
| C (Crosscultural contact) | 1 | 772 | 772 | 1.84 | .1892 |
| S (SES) | 1 | 11476 | 11476 | 27.37 | .0001 |
| L x C | 1 | 2435 | 2435 | 5.81 | .0252 |
| L x S | 1 | 682 | 682 | 1.63 | .2160 |
| C x S | 1 | 379 | 379 | .90 | .3526 |
| L x C x S | 1 | 398 | 398 | .95 | .3412 |
| Subj W Groups | 21 | 8806 | 419 | | |